

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
25 July 2002 (25.07.2002)

PCT

(10) International Publication Number
WO 02/058157 A2

(51) International Patent Classification⁷: **H01L 27/148**

[GB/GB]; 218 Fambridge Road, Maldon, Essex CM9 6BJ (GB).

(21) International Application Number: PCT/GB02/00138

(22) International Filing Date: 14 January 2002 (14.01.2002)

(74) Agent: **HUCKER, Nerys**; Marconi Intellectual Property, Marrable House, The Vineyards, Gt. Baddow, Chelmsford, Essex, CM2 7QS (GB).

(25) Filing Language: English

(81) Designated States (*national*): CA, JP, US.

(26) Publication Language: English

(84) Designated States (*regional*): European patent (), BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).

(30) Priority Data:
0101301.0 18 January 2001 (18.01.2001) GB

Published:

— without international search report and to be republished upon receipt of that report

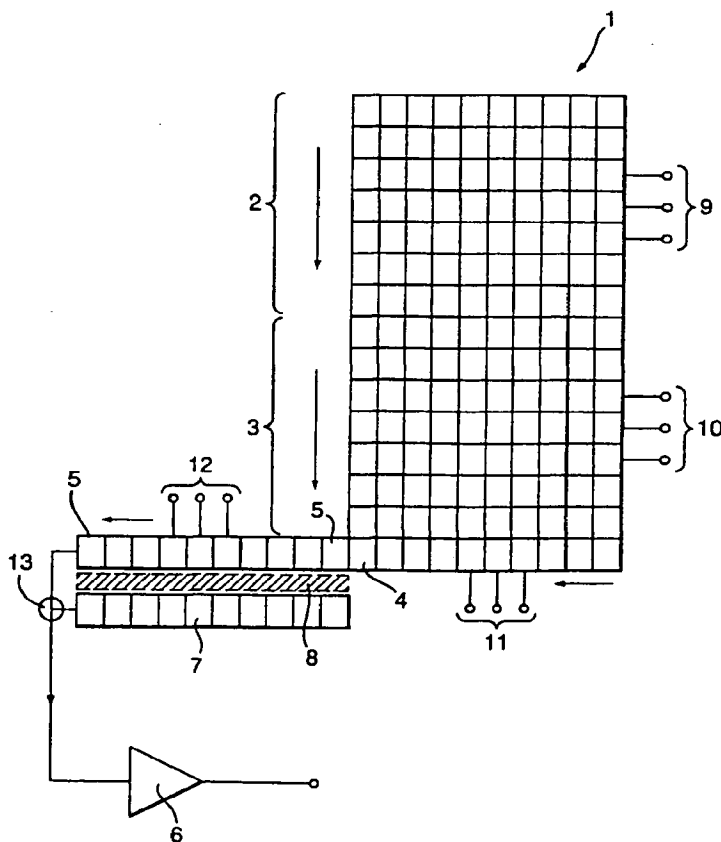
(71) Applicant (*for all designated States except US*): **MARCONI APPLIED TECHNOLOGIES LIMITED**
[GB/GB]; One Bruton Street, London W1J 6AQ (GB).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): **POOL, Peter, J.**

(54) Title: **SOLID STATE IMAGER ARRANGEMENTS**



(57) Abstract: In a CCD imager, charge representative of incident radiation is clocked from an image area (2) via a store section (3) to an output register (4). The signal charge is clocked from the output register (4) to a multiplication register (5) to give charge multiplication. Excess charge developed at the multiplication register (5) is transferred into an additional register (7) which is clocked in synchronism with the multiplication register (5). The outputs of the registers are combined at (13) and applied to a charge detector (6). The provision of the additional register (7) increases the dynamic range capability of the CCD imager.

WO 02/058157 A2

BEST AVAILABLE COPY